



NU DASMARIÑAS

GESTS01X – Science, Technology and Society

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Week 5A - PARADIGM SHIFTS AND SCIENTIFIC REVOLUTION



Learning Outcomes

- Students will develop an understanding of the characteristics and scope of technology
- Students will develop an understanding of the core concepts of technology.

What is a Paradigm?

- A model of something, or a very clear and typical example of something.
- A very clear or typical example used as a model.



Example of a Paradigm

Black Swan Theory:



Example of a Paradigm

There are always some first principles which underlie every paradigm. When these principles are invalidated, the paradigm is invalidated as well.



What is a Paradigm shift?

- A fundamental change in approach or underlying assumptions
- An important change that happens when usual way of thinking about or doing something is replaced by a new and different way



Understanding a Paradigm Shift

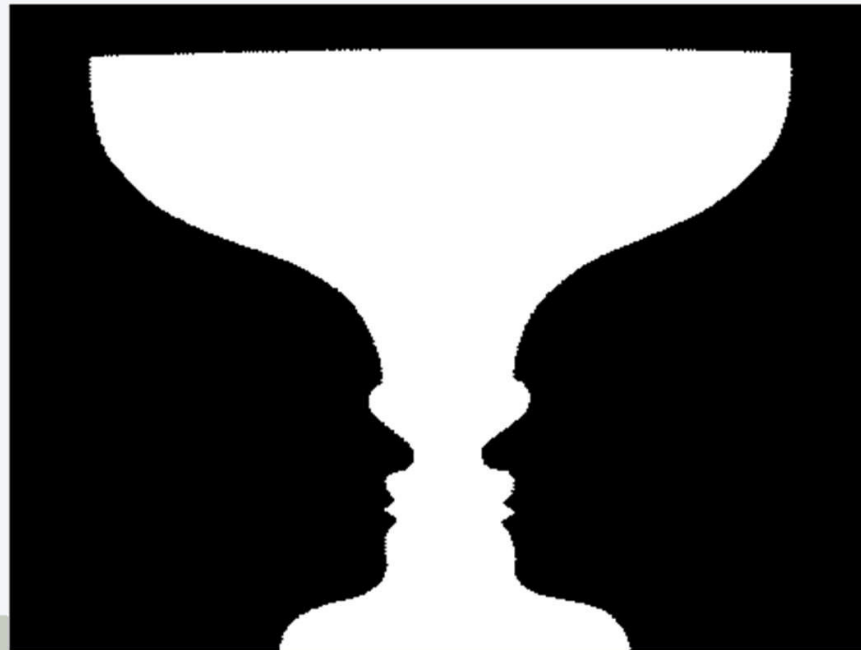
- Is she a young lady or an old woman?





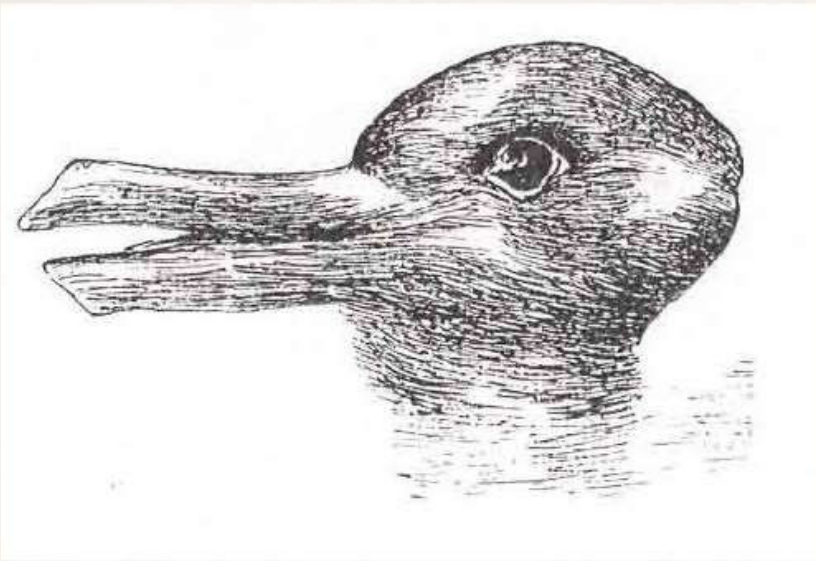
Understanding a Paradigm Shift

- Is it a vase or a face?





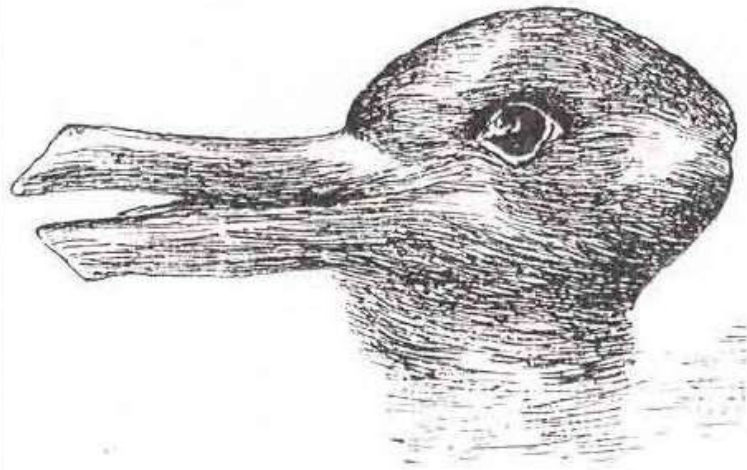
Understanding a Paradigm Shift



What is this?



Understanding a Paradigm Shift



"I see a bird."

"I see a rabbit!"

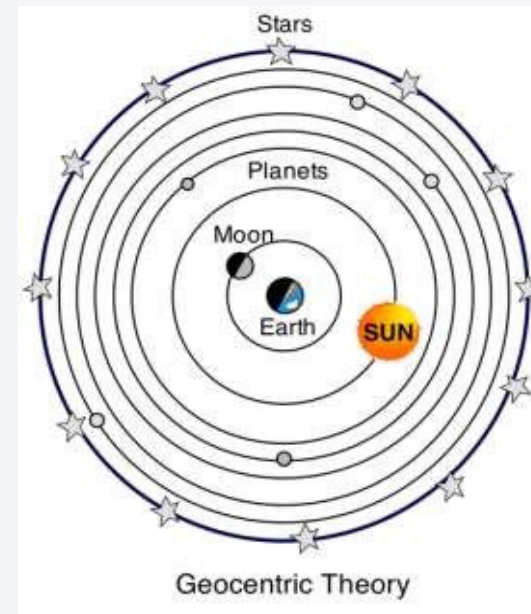
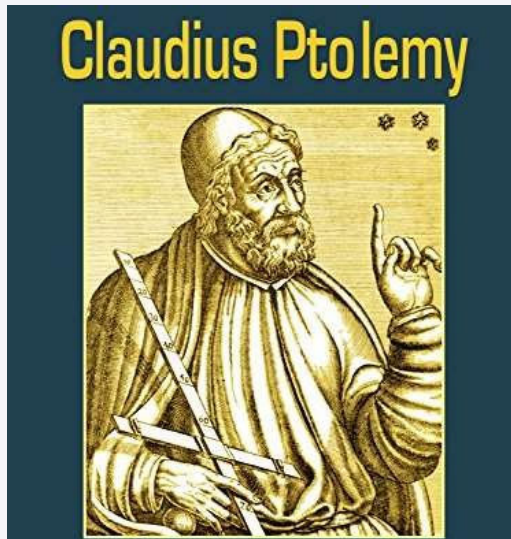
What is this?

What else is this?

What had to happen to
shift your perspective?

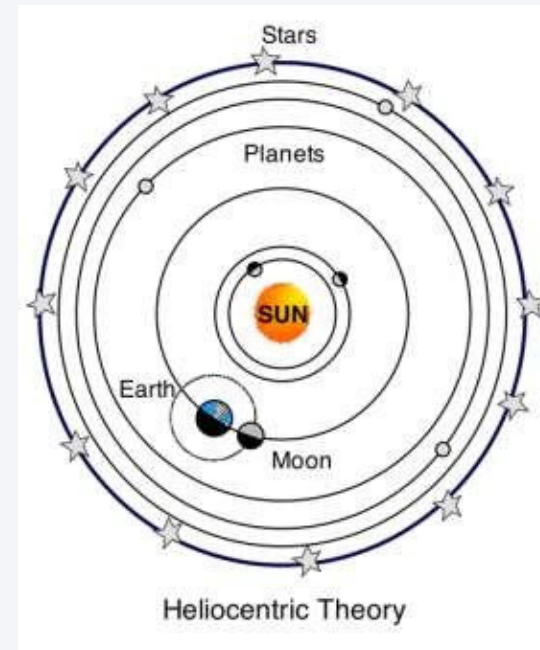
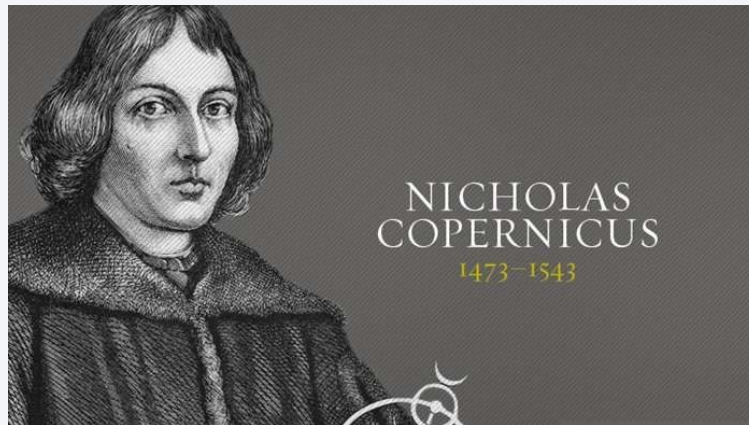
Example of a Paradigm Shift

- Is the Universe Geocentric?



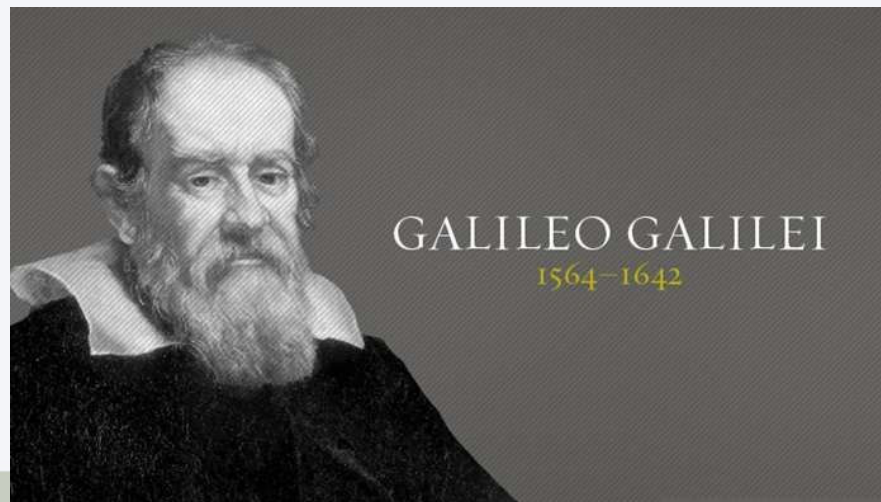
Example of a Paradigm Shift

- Is the Universe Heliocentric?



Example of a Paradigm Shift

- Most scholars rejected Copernicus theory because it went against Ptolemy, the church, and because it called for the Earth to rotate on its axis. Until...



Example of a Paradigm Shift

- Galileo came to picture.



Example of a Paradigm Shift

- Galileo put under house arrest.



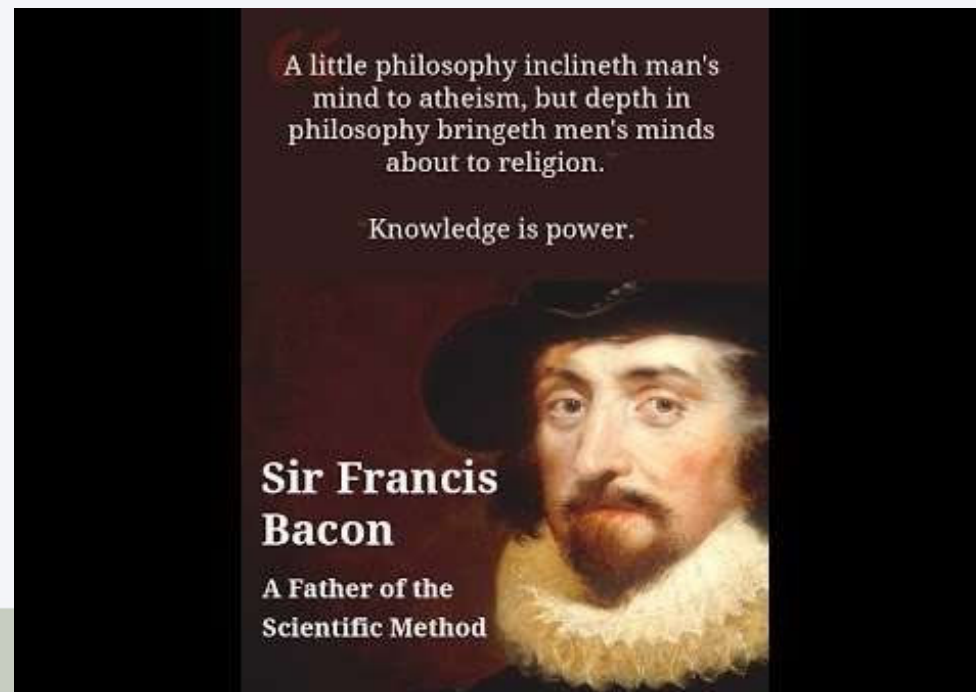
Example of a Paradigm shift in the modern world

Mobile phones are used to communicate only thru voice messages, but because there is a change in the normal way of how mobile phones work we are now in the era of Smart phones.



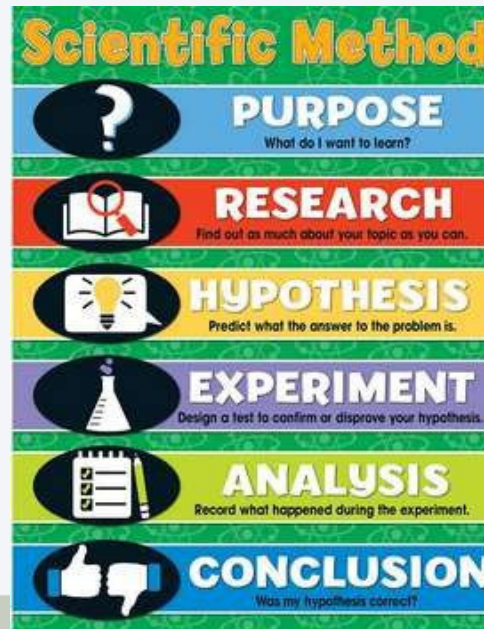
Developing the SCINTIFIC METHOD

- The Father of Scientific Method, Sir Francis Bacon.



The scientific method

- By the early 1600's, a new approach to science had emerged, known as the [Scientific Method](#).



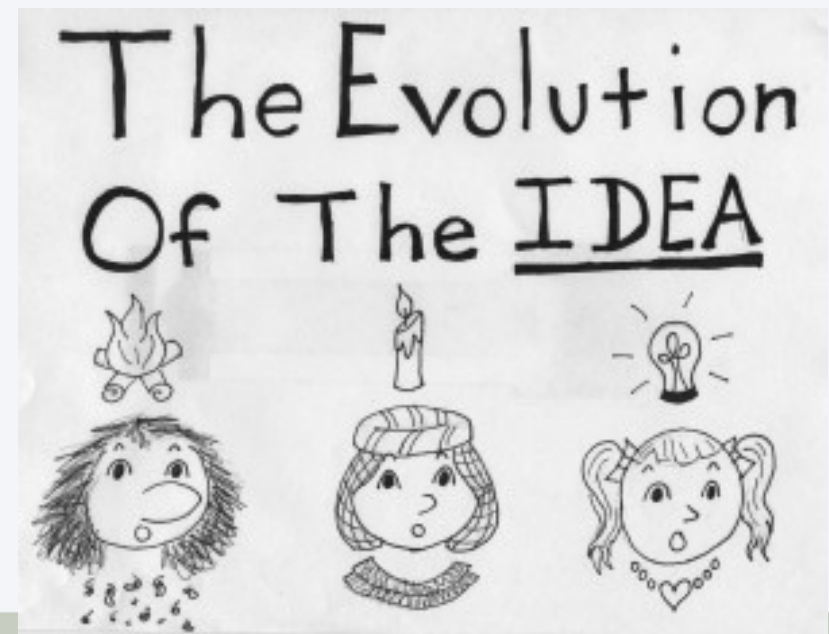
The scientific method

- Sir Isaac Newton used the Scientific Method



The Scientific Revolution

- refers to **historical** changes in thought and belief, to changes in social and institutional organization.







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